

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION



MISSOURI STATE OPERATING PERMIT

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No. MO-0028789

Owner: City of Centralia
Address: 114 South Rollins, Centralia, MO 65240

Continuing Authority: Same as above
Address: Same as above

Facility Name: Centralia Wastewater Disposal Facility
Address: Centralia, MO 65240

Legal Description: See page 2

Receiving Stream: See page 2
First Classified Stream and ID: See page 2
USGS Basin & Sub-watershed No.: See page 2

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

FACILITY DESCRIPTION

See page 2

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

July 26, 2002 December 12, 2003
Effective Date Revised

Stephen M. Mahfood, Director, Department of Natural Resources
Executive Secretary, Clean Water Commission

July 25, 2007

Expiration Date
MO 780-0041 (10-93)

G. Irene Crawford, Director, Northeast Regional Office

FACILITY DESCRIPTION (continued)

Outfall #001 - Northwest System - SIC #4952

Two cell lagoon/spray irrigation/sludge is retained in lagoon.
Design population equivalent is 1,460.
Design flow is 146,000 gallons per day.
Design sludge production is 10 dry tons/year.

Legal Description: NE ¼, NW ¼, Sec. 9, T51N, R11W, Boone County
Receiving Stream: Tributary to Goodwater Creek (U)
First Classified Stream and ID: Youngs Creek (C)(00140)
USGS Basin & Sub-watershed No.: (07110006-030001)

Outfall #002 - Northeast System - SIC #4952

Two cell lagoon/spray irrigation/sludge is retained in lagoon.
Design population equivalent is 4,150.
Design flow is 415,000 gallons per day.
Design sludge production is 29 dry tons/year.

Legal Description: NE ¼, NW ¼, Sec. 12, T51N, R11W, Audrain County
Receiving Stream: Tributary to Youngs (U)
First Classified Stream and ID: Youngs Creek (C)(00140)
USGS Basin & Sub-watershed No.: (07110006-030001)

Outfall #003 - Sims Storage Cell - SIC #4952

Stores pumped effluent from Outfalls #001 & #002 for irrigation.
99,899,000 gallons stored.
Irrigates 285 acres.
21.9 acres 14 feet deep.

Legal Description: NE ¼, SE ¼, Sec. 25, T52N, R12W, Audrain County
Receiving Stream: Tributary to Long Branch (U)
First Classified Stream and ID: Long Branch (C)(00139)
USGS Basin & Sub-watershed No.: (07110006-030002)

Outfall #004 - Bowne Storage Cell - SIC #4952

Stores pumped effluent from Outfalls #001 & #002 for irrigation.
20,800,000 gallons stored.
Irrigates 35 acres.
5.32 acres 12 feet deep.

Legal Description: NE ¼, NE ¼, Sec. 1, T51N, R12W, Boone County
Receiving Stream: Tributary to Long Branch (U)
First Classified Stream and ID: Long Branch (C)(00139)
USGS Basin & Sub-watershed No.: (07110006-030002)

Outfall #005 - Benoit Storage Cell - SIC #4952

Stores pumped effluent from Outfalls #001 & #002 for irrigation.
26,899,014 gallons stored.
Irrigates 62 acres.
4.99 acres 16 feet deep.

Legal Description: NW ¼, NW ¼, Sec. 2, T51N, R11W, Boone County
Receiving Stream: Tributary to Goodwater Creek (U)
First Classified Stream and ID: Youngs Creek (C)(00140)
USGS Basin & Sub-watershed No.: (07110006-030001)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

PERMIT NUMBER MO-0028789

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfalls #001 - #005</u> (Notes 1 & 2)						
Flow	MGD	*		*	once/day when discharge occurs	24 hr. estimate
Biochemical Oxygen Demand ₅ **	mg/L		65	45	once/week****	grab
Total Suspended Solids**	mg/L		120	70	once/week****	grab
pH - Units	SU	***		***	once/week****	grab
Aluminum, Total	mg/L	*			once/quarter****	grab
Copper, Total Recoverable	mg/L	0.2			once/quarter****	grab
Cyanide, Amenable to Chlorination	mg/L	0.05			once/quarter****	grab
Iron, Total Recoverable	mg/L	1.5			once/quarter****	grab
Zinc, Total Recoverable	mg/L	1.0			once/quarter****	grab
Oil & Grease	mg/L	20		15	once/quarter****	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE October 28, 2002.

<u>Outfalls #003 - #005</u> (Note 3)						
Lagoon Freeboard	feet	*			once/month*****	measured
Irrigation Period	hours	*			once/day*****	total
Volume Irrigated	gallons	*			once/day*****	total
Application Area	acres	*			once/day*****	total
Application Rate	inches/ acre	*			once/day*****	total
Rainfall	inches	*			once/day*****	total
<u>Irrigated Wastewater</u> (Notes 4 & 5)						
pH - Units	SU	***			once/month	grab
Total Kjeldahl Nitrogen as N	mg/L	*			once/month	grab
Total Phosphorus as P	mg/L	*			once/month	grab

MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY; THE FIRST REPORT IS DUE January 28, 2004. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

B. STANDARD CONDITIONS

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED Parts I, II & III STANDARD CONDITIONS DATED October 1, 1980 and August 15, 1994, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

- * Monitoring requirement only.
- ** This facility is required to meet a removal efficiency of 65% or more.
- *** pH is measured in pH units and is not to be averaged. The pH is to be maintained at or above 6.0 pH units.
- **** Sample when discharge occurs.
- ***** Daily records shall be maintained and summarized into an annual operating report which shall be submitted January 28 of the following year. This report shall contain but not be limited to the following:
 - (a) record of maintenance and repairs performed during the year;
 - (b) average number of times per month the facility is checked to see if it is operating properly;
 - (c) the number of days the lagoon has discharged during the year, the discharge flow, the reasons discharge and effluent analysis performed;
 - (d) description of any unusual operating conditions encountered during the year; and
 - (e) a summary of the irrigation operations including lagoon freeboard at the start and end of the irrigation season, the number of days of irrigation for each month, the total gallons irrigated, the total acres used, the application rate in inches/acre for the year and the total precipitation received at the facility.

Note 1 - Partial Irrigation (consumptive irrigation). Wastewater shall be used during the growing season for consumptive irrigation on crop land when additional water is needed to supply crop moisture requirements. There shall be no discharge of wastewater during normal operation from April 1 to October 31. Sufficient acreage of land application area to provide for lagoon drawdown during suitable soil and weather conditions shall be available.

Note 2 - Notify the department as soon as possible and no later than within 48 hours of any discharge that occurs.

Note 3 - Lagoon freeboard shall be reported as lagoon water level in feet below the overflow level.

Note 4 - Wastewater that is irrigated shall be sampled at the irrigation pump or wet well.

Note 5 - While limitations are not applied to the wastewater being land applied, the monthly application rates for nitrogen shall be adjusted to that plant available nitrogen does not exceed the crop uptake rate for nitrogen.

C. SPECIAL CONDITIONS

1. This permit may be reopened and modified, or alternatively revoked and reissued, to:
 - (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
 - (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
 - (2) controls any pollutant not limited in the permit.
 - (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
 - (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.

C. SPECIAL CONDITIONS (continued)

2. All outfalls must be clearly marked in the field.

3. Changes in Discharges of Toxic Substances

The permittee shall notify the Director as soon as it knows or has reason to believe:

- (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
- (1) One hundred micrograms per liter (100 µg/L);
 - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
 - (4) The level established in Part A of the permit by the Director.
- (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.

4. Report as no-discharge when a discharge does not occur during the report period.

5. General Criteria. The following water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:

- (a) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
- (b) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
- (c) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
- (d) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
- (e) There shall be no significant human health hazard from incidental contact with the water;
- (f) There shall be no acute toxicity to livestock or wildlife watering;
- (g) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
- (h) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.

6. Sludge and Biosolids Use For Domestic Wastewater Treatment Facilities

- (a) Permittee shall comply with the pollutant limitations, monitoring, reporting, and other requirements in accordance with the attached permit Standard Conditions.
- (b) If sludge is not removed by a contract hauler, permittee is authorized to land apply biosolids. Permit Standard Conditions, Part III shall apply to the land application of biosolids. Permittee shall notify the department at least 180 days prior to the planned removal of biosolids. The department may require submittal of a biosolids management plan for department review and approval as determined appropriate on a case-by-case basis.

C. SPECIAL CONDITIONS (continued)

7. Lagoons and earthen basins shall have a liner that is designed, constructed and maintained in accordance with 10 CSR 20-8.020(13)(A)4. If operating records indicate, excessive percolation, the department may require a water balance test in accordance with 10 CSR 20-8.020(16) or other investigations to evaluate adequacy of the lagoon seal. The department may require corrective action as necessary to eliminate excess leakage.
8. Wastewater Irrigation System.
- a. Discharge Reporting. Any unauthorized discharge from the lagoon or irrigation system shall be reported to the department as soon as possible but always within 48 hours. Discharge is allowed only as described in the Facility Description and Effluent Limitations sections of this permit.
- b. Irrigation Design. Design and operation shall be in accordance with 10 CSR 20-8.020(15). Permittee shall operate the land application system in accordance with the design parameters listed in the Facility Description section of this permit:
- (2) Partial Irrigation System. When the Facility Description is "Partial Irrigation" or combined irrigation and discharge, wastewater will be irrigated when feasible and discharges are allowed as specifically authorized under the Effluent Limitations and Monitoring Requirements in Section A of this permit.
- c. Lagoon Operating Levels - No-discharge Systems. The minimum and maximum operating water levels for the storage lagoon shall be clearly marked. Each lagoon shall be operated so that the maximum water elevation does not exceed one foot below the overflow point except due to exceedances of the 1-in-10 year or 25-year-24 hour storm events.
- d. Emergency Spillway. Lagoons and earthen storage basins should have an emergency spillway to protect the structural integrity of earthen structures during operation at near full water levels and in the event of overflow conditions. The spillway shall be at least one foot below top of berm. The department may waive the requirement for overflow structures on small existing basins.
- e. Land Application Site Locations. The permittee shall land apply only to suitable sites located within the overall property boundaries and descriptions listed in the permit application and approved Operation and Maintenance Manual. Permittee requests for additional sites including non-owned property must follow permit modification procedures prior to land application. To request additional sites, the permittee should submit a revised application Form A and I, mailing addresses for first down stream land owners of each site, topographic maps and other pertinent information for the proposed sites.
- f. Land Application Equipment. The land application system shall be operated so as to provide uniform distribution of applied wastes over the entire application site. A complete ground cover of vegetation shall be maintained on the irrigation site unless the system is approved for row crop irrigation.
- g. Saturated/Frozen Conditions. There shall be no irrigation during frozen, snow covered, or saturated soil conditions. There shall be no spray irrigation on days when more than 0.2 inch of precipitation is received or when there is observation by operator of an imminent or impending rainfall event.

C. SPECIAL CONDITIONS (continued)

8. Wastewater Irrigation System (continued)

- h. Buffer Zones. There shall be no irrigation within 300 feet of any down gradient, sinkhole, losing stream or water supply withdrawal; 300 feet of any lake or pond used for water supply; 100 feet of other ponds and lakes; 100 feet of gaining streams; 50 feet of intermittent or wet weather streams; 150 feet of dwelling; or 50 feet of the property line.
- i. Public Access Restrictions. Public access shall not be allowed to the irrigation site(s).
- j. Equipment Checks during Irrigation. The irrigation system and application site shall be visually inspected at least once/day during wastewater irrigation to check for equipment malfunctions and runoff from the irrigation site.

D. SCHEDULE OF COMPLIANCE

- 1. The City shall review design and daily flow rates, land application practices and acreage requirements and assess any needs to ensure that the facility can consistently operate as a no-discharge facility. If discharges are occurring or are likely to occur, the City shall propose a plan by June 1, 2003 to obtain sufficient acreage for application of wastewater so that discharges are limited to only those caused by catastrophic or chronic storm events.
- 2. As an alternative to a no-discharge system the permittee may by November 1, 2003, construct a land treatment system addition and revisions to Northeast Lagoon Site (Outfall #002) so that discharges other than through this system are limited to only those caused by catastrophic or chronic storm events.